REMARKS

FORMAL MATTERS:

Claims 1-6 and 18-26 are pending after entry of the amendments set forth herein.

Claims 7-17 are canceled without prejudice.

No new matter is added.

INFORMATION DISCLOSURE STATEMENT:

In response to the objection to the Information Disclosure Statement applicants have attached a revised Information Disclosure Statement that is believed to comply with 37 C.F.R. 1.98(a)(1).

DRAWINGS

An objection to the drawings was made. This objection was directed specifically at the embodiment encompassed by claims 12 and 13. Claims 12 and 13 have been canceled. Accordingly, the claim objection is believed to have been rendered moot.

REJECTIONS UNDER §112, ¶1

Claims 13 and 14 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Applicants do not acquiesce to the validity of the rejection. However, applicants wish to promote a spirit of cooperation with the Examiner. Accordingly, claims 13 and 14 have been canceled from the application thereby rendering these rejections moot.

REJECTIONS UNDER §112, ¶2

Claims 9-11, 13-15, 7, 8, 16 and 17 have been rejected under 35 U.S.C. §112, second paragraph.

Applicants do not acquiesce to the validity of these rejections. However, applicants wish to promote a spirit of cooperation with the Examiner and expedite the prosecution of this application. Accordingly, all of these claims have been canceled thereby rendering these rejections moot.

REJECTIONS UNDER §102 - JENNINGS

Claims 1-17 and 24-26 are rejected under 35 U.S.C. §102(b) as being anticipated by Jennings (USP 3,463,404)

The rejection is traversed as applied and as it might be applied to the presently pending claims.

In paragraph 2 of claim 1 the pressure chamber is claimed as being "in direct, uninterrupted fluid connection with the exit opening of the feeding supply means." In the Jennings reference the second fluid could be described as being a pressurized gas 8. The pressurized gas 8 is not in direct, uninterrupted fluid connection with the exit opening 11 of the device shown in Jennings. The essence of the Jennings device includes the porous member 9. The pressurized gas 8 must flow through convoluted paths of the porous member 9 in order to reach the first fluid. The flow is not in a direct path. Thus, Jennings does not anticipate claims 1-17.

The Jennings reference specifically refers to the porous member as being a porous material such as porous metal, porous carbon, porous graphite, porous ceramic and porous cermets (see col. 2, lines 52-54). The rejection has argued that this porous member provides for the claimed "direct, uninterrupted fluid connection." of claim 1. However, it is clear when looking at the porous member 9 in the figures as well as the description of the material within Jennings that the claim limitations are not met by Jennings. The pores provide a convoluted and circuitous path through the porous membrane which is anything but direct. In view of such reconsideration and withdrawal of the rejection is respectfully requested.

In accordance with the method of claim 24 the final paragraph describes the relationship between the "particle surface tension and the amplitude of turbulent pressure fluctuation outside the chamber." This results in "particles having dimensions smaller than the dimensions of the focused liquid stream." This is radically different from what is taught by Jennings. Jennings uses the porous member 9 so that "the gas flowing into the member under the operating conditions forms a sheet that around the liquid flowing through the orifice 11." Jennings goes on to indicate that "in this manner turbulence in the liquid is maintained at a minimum." This is clearly contrary to the turbulent pressure fluctuation per claim 24. The present invention creates turbulence and Jennings minimizes turbulence.

Within claim 25 in the final paragraph section "(b)" there is claimed "creating a violent interaction between the liquid and the gas." This is contrary to what is taught within Jennings which indicates that the pressurized gas flows through the porous member 9 and "in this manner turbulence in

the liquid is maintained at a minimum." Clearly claim 25 is not anticipated by Jennings. Jennings teaches away from the claimed method.

REJECTIONS UNDER §102 – GANAN-CALVO

Claims 1-17 and 21-26 are rejected under 35 U.S.C. §102(b) as being anticipated by Ganan-Calvo et al. (WO 97/43048).

The rejection is traversed as applied and as it might be applied to the present claims.

The undersigned does not speak Spanish and as such cannot refer to specific language within the PCT publication WO 97/43048. Reference will be made to U.S. Patent 6,595,202 which contains all of the information in the PCT publication plus substantial additional information. Further, the undersigned points out that conversations have been held with Alfonso Ganan-Calvo on a number of different occasions with respect to disclosure within the PCT publication and the '202 U.S. Patent.

Both the Ganan-Calvo PCT publication and the Ganan-Calvo '202 patent are radically different from the invention of claims 18-20. In claim 18 the gas is directed against the liquid stream at an angle of from about 45° to 90° causing the liquid and the gas to physically interact. This is not done in the cited reference. The cited art is more similar to Jennings than it is the present invention. Reference is made to the '202 patent at col. 2, lines 39-44. The '202 patent specifically indicates that the method provides for a "stable liquid-gas interface and a stable capillary jet of the liquid." This is radically different from applicants' method which forces the stream of gas against the liquid stream at an angle in order to cause physical interaction.

The rejection has recognized that the cited art does not disclose moving the gas at equal to or greater than the speed of sounds but argues that such would an obvious modification. However, it is not an obvious modification because the overall purpose of the methodology disclosed within the cited art is to provide a smooth capillary jet which is stabilized. Forcing the gas against the liquid at very high speeds is intended to cause the gas to physically interact with the liquid as claimed and to break up the liquid stream and create much smaller particles than would ordinarily be created.

The rejection argues that the Ganan-Calvo reference forces the liquid into the gas to produce a spray at 7. This is not correct. As pointed out the gas of the reference is not forced against the liquid but rather is used to create a stable capillary jet. The spray is not formed until it is outside of the pressure chamber when the stable jet disassociates based on the physical properties of the liquid such as its surface tension. However, the gas of the reference does not break the liquid up as suggested within

the rejection. The presently claimed method does use the gas to break up the liquid. In view of such reconsideration and withdrawal of the rejection is respectfully requested.

REJECTIONS UNDER §103(A) - JENNINGS

Claims 7, 8, 18, 21 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Jennings (3,463,404)

The rejection is traversed as applied and as it might be applied to the presently pending claims.

The rejection is moot with respect to claims 7 and 8 as these claims have been canceled. Jennings does not disclose moving the gas at a speed greater than or equal to the speed of sound. Further, Jennings does not disclose directing the gas against the liquid stream at an angle of 45° to 90° to cause physical interaction. Jennings discloses using the gas pressure (8) from the porous membrane (9) in order to create a sheath around the liquid flowing through the orifice (11) as taught within col. 2, lines 60-64. Thus, the gas (8) is not used to break up the liquid.

REJECTIONS UNDER §103(A) – GANAN-CALVO

Claims 18, 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable by Ganan-Calvo et al. (WO 97/43048).

The rejection is traversed as applied and as it might be applied to the presently pending claims.

Ganan-Calvo does not disclose directing the gas at a speed greater than or equal to the speed of sound. Further, Ganan-Calvo does not disclose directing the gas at the liquid stream at an angle of about 45° to 90° causing the liquid and the gas to physically interact. Ganan-Calvo uses the gas in order to stabilize and focus the liquid stream. Physical interaction of the gas and the liquid in order to destabilize the liquid is to be avoided per the Ganan-Calvo reference. In view of such reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

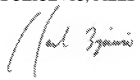
Claims 7-17 have been canceled. This eliminates all of the objections and rejections with respect to the drawings and the 35 U.S.C. §112, first and second paragraph rejections. With respect to the art based rejections it is pointed out that the present invention is directed to a method which uses the second fluid or gas to destabilize the first fluid or liquid stream. The destabilization breaks the stream into

particles much smaller than the particles which are formed when a stream naturally disassociates into spherical particles. Both the Jennings and the Ganan-Calvo cited art are directed towards methods which use the gas to stabilize the liquid stream and not to interact with it and break it up into small particles. The cited art is not teaching the claimed invention or rendering it obvious but is teaching away from the cited art. In view of such reconsideration and withdrawal of the rejection is respectfully requested.

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number AERX-076CIP.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP



Date: 26 September 2008 By: _____
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